

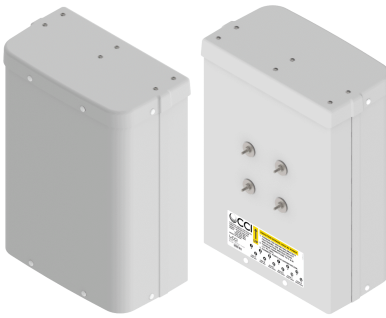


Antennas

DATA SHEET

TriBand Small Cell Panel Antenna

SCA65F-KEH1B



- One foot (498 mm), TriBand, twelve port antenna with a 65° azimuth beamwidth, covering 698-960 MHz, 1695-2690 MHz and 3300-4200 MHz frequencies
- Four wide band ports covering 698-960 MHz, four wide band ports covering 1695-2690 MHz and four wide band ports covering 3300-4200 MHz, all within a low weight and low profile 19.6" x 14.3" (498 X 363 mm) panel antenna
- Full Spectrum Compliance for 698-960 Mhz, 1695-2690 MHz and 3300-4200 MHz frequencies
- The Low weight and Low profile of this panel antenna, makes this an ideal solution for Small Cell/C-RAN Densification deployments in difficult jurisdictional urban, suburban and rural environments
- Ordering options for multiple mounting brackets, including simple wall mounting or Dual-Axis adjustment bracket. Which makes it ideal for mounting on utility, lighting and traffic poles
- Fixed EDT of 0° for the 698-960 MHz ports , 4° for the 1695-2690 MHz ports and 0° EDT for 3300-4200 MHz ports
- Equipped with 4.3-10 connectors

Overview

The CCI TriBand 65° array is a twelve port Small Cell antenna, with four wide band ports covering 698-960 Mhz, four wide band ports covering 1695-2690 MHz and four wide band ports covering 3300-4200 MHz. The CCI 65° Small Cell antenna provides 4x4 Multiple-input-Multiple-output (MIMO) functionality across the 698-960 MHz ports, 1695-2690 MHz and 3300-4200 MHz ports. The CCI 65° Small Cell antenna is an ideal solution for Small Cell/C-RAN/o-DAS Densification deployments in difficult jurisdictional urban, suburban and rural where antenna size and count are restricted.

The CCI 65° Small Cell antenna is an ideal solution for Small Cell/C-RAN/o-DAS Densification deployments in difficult jurisdictional urban, suburban and rural where antenna size and count are restricted.

CCI antennas are designed and produced to ISO 9001 certification standards for reliability and quality in our state-of-the-art manufacturing facilities.

Applications

- Small Cell/C-RAN/o-DAS in Urban, Suburban and other visually sensitive environments
- Ideal for Macro to Small Cell Coverage Transition Zones
- Outdoor Distributed Antenna Systems (oDAS), neutral host in venues, campuses and other outdoor coverage applications



Antennas

SPECIFICATIONS

TriBand Small Cell Panel Antenna

SCA65F-KEH1B

Electrical

Ports	4 x Low Band Ports for 698-960 MHz			
Frequency Range	698-806 MHz	790-862 MHz	824-896 MHz	880-960 MHz
Gain ¹	7.6 dBi	7.7 dBi	7.9 dBi	8.1 dBi
Gain (Average) ²	6.9 dBi	7.2 dBi	7.4 dBi	7.7 dBi
Azimuth Beamwidth (-3dB)	77°	76°	74°	70°
Elevation Beamwidth (-3dB)	81°	73°	72°	70°
Electrical Downtilt	0°	0°	0°	0°
Front-to-Back Ratio @180°	> 30 dB	> 34 dB	> 34 dB	> 32 dB
Cross-Polar Discrimination (at Peak)	> 23 dB	> 23 dB	> 23 dB	> 23 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Voltage Standing Wave Ratio(VSWR)	< 1.55:1	< 1.55:1	< 1.55:1	< 1.55:1
Passive Intermodulation (2x20W)	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc
Input Power Continuous Wave (CW)	100 watts	100 watts	100 watts	100 watts
Polarization	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°
Input Impedance	50 ohms	50 ohms	50 ohms	50 ohms
Lightning Protection	DC Ground	DC Ground	DC Ground	DC Ground

¹Peak gain across sub-bands.

²Electrical specifications follow document "Recommendation on Base Station Antenna Standards" (BASTA) V11.1.

Ports	4 x High Band Ports for 1695-2690 MHz					4 x High Band Ports for 3300-4200 MHz
Frequency Range	1695-1880 MHz	1850-1990 MHz	1920-2180 MHz	2300-2400 MHz	2496-2690 MHz	3300-4200 MHz
Gain ¹	10.7 dBi	10.8 dBi	10.8 dBi	10.8 dBi	11.7 dBi	9.1 dBi
Gain (Average) ²	10.3 dBi	10.4 dBi	10.3 dBi	10.5 dBi	11.2 dBi	8.0 dBi
Azimuth Beamwidth (-3dB)	63°	61°	64°	71°	64°	62°
Elevation Beamwidth (-3dB)	41°	39°	39°	35°	30°	41°
Electrical Downtilt	4°	4°	4°	4°	4°	0°
Elevation Sidelobes (1st Upper)	< -19 dB	< -18 dB	< -21 dB	< -13 dB	< -10 dB	NA
Front-to-Back Ratio @180°	> 35 dB	> 35 dB	> 35 dB	> 35 dB	> 35 dB	> 33 dB
Cross-Polar Discrimination (at Peak)	> 18 dB	> 18 dB	> 21 dB	> 25 dB	> 21 dB	> 18 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Voltage Standing Wave Ratio(VSWR)	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1
Passive Intermodulation (2x20W)	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc	NA
Input Power Continuous Wave (CW)	120 watts	120 watts	120 watts	120 watts	120 watts	50 watts
Polarization	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°
Input Impedance	50 ohms	50 ohms	50 ohms	50 ohms	50 ohms	50 ohms
Lightning Protection	DC Ground	DC Ground	DC Ground	DC Ground	DC Ground	DC Ground

¹Peak gain across sub-bands.

²Electrical specifications follow document "Recommendation on Base Station Antenna Standards" (BASTA) V11.1.



Antennas

SPECIFICATIONS

TriBand Small Cell Panel Antenna

SCA65F-KEH1B

Mechanical

Dimensions (LxWxD)	19.6x14.3x7.9 in (498x363x200 mm)
Survival Wind Speed	> 150 mph (> 241 kph)
Front Wind Load	60 lbs (265 N) @ 100 mph (161 kph)
Side Wind Load	33 lbs (146 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	2.3 ft ² (0.2 m ²)
Weight *	10.4 lbs (4.7 kg)
Connector	12 x 4.3-10 female
Mounting Pole	2 to 5 in (5 to 12 cm)

* Weight excludes mounting



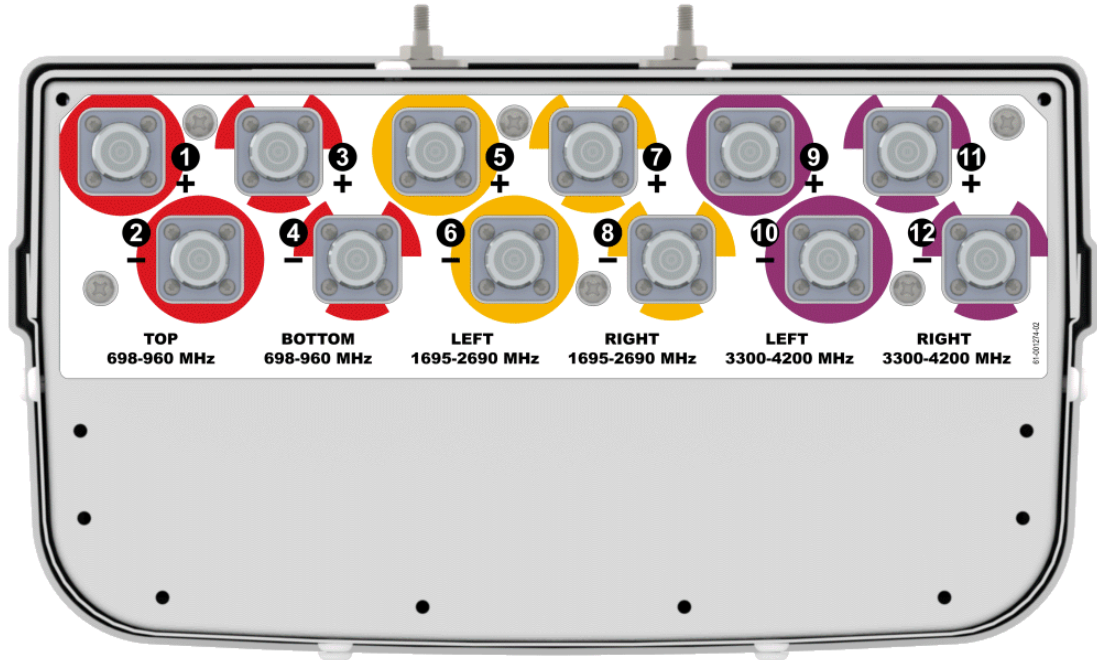
Antennas

SPECIFICATIONS

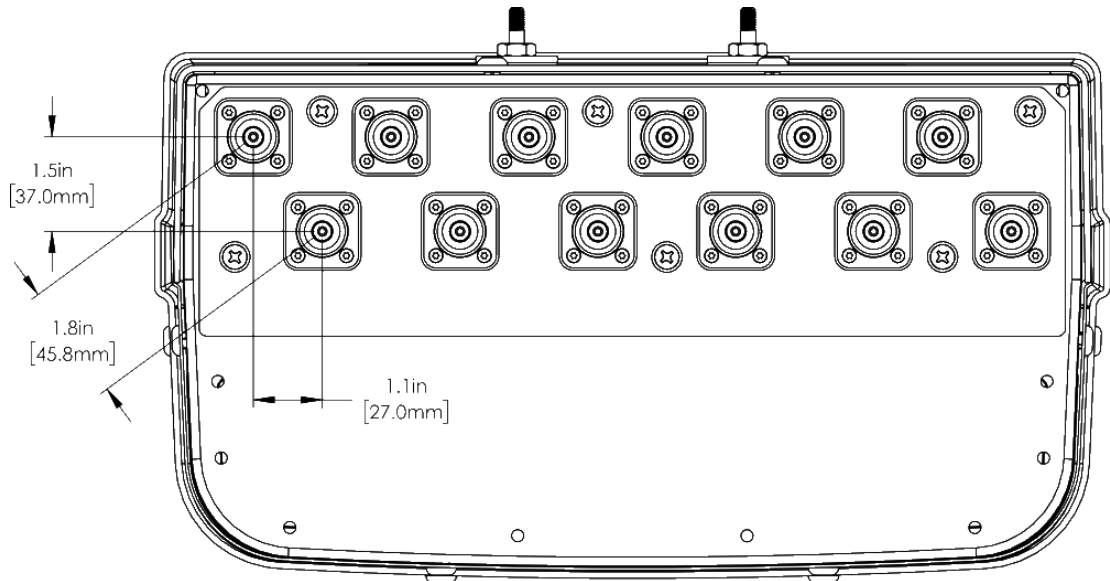
TriBand Small Cell Panel Antenna

SCA65F-KEH1B

Bottom View



Connector Spacing





Antennas

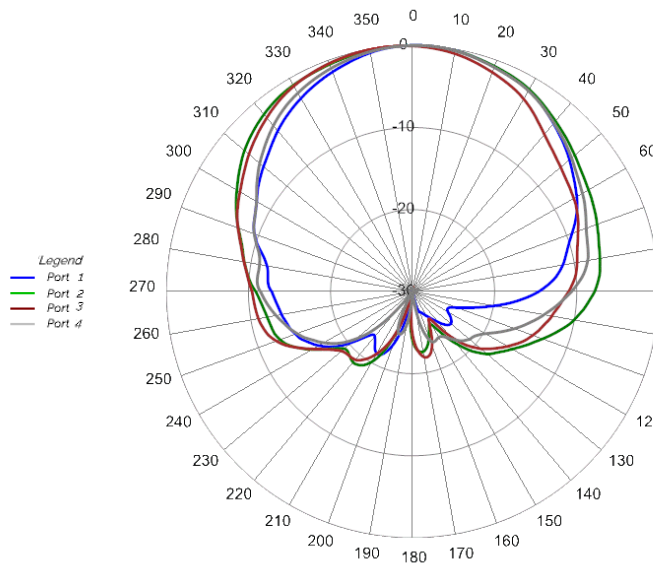
SPECIFICATIONS

TriBand Small Cell Panel Antenna

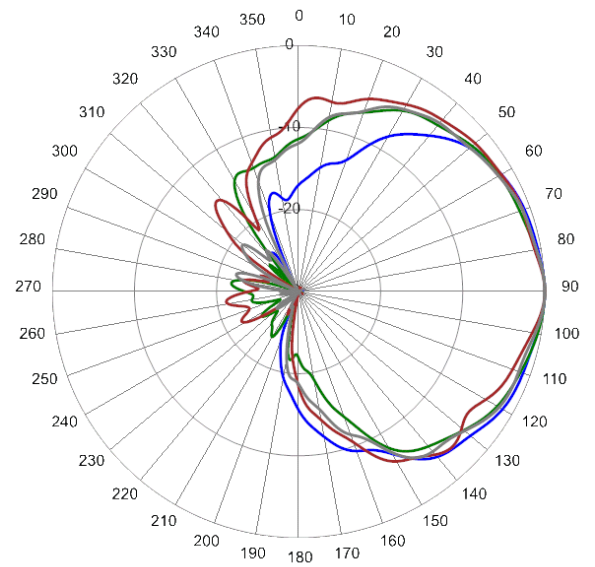
SCA65F-KEH1B

Typical Antenna Patterns

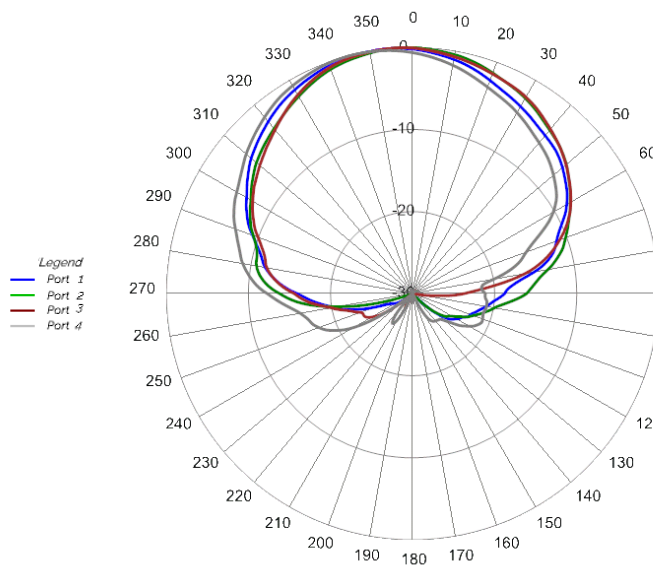
For detailed information on additional antenna patterns, contact customer support at support@cciproducts.com



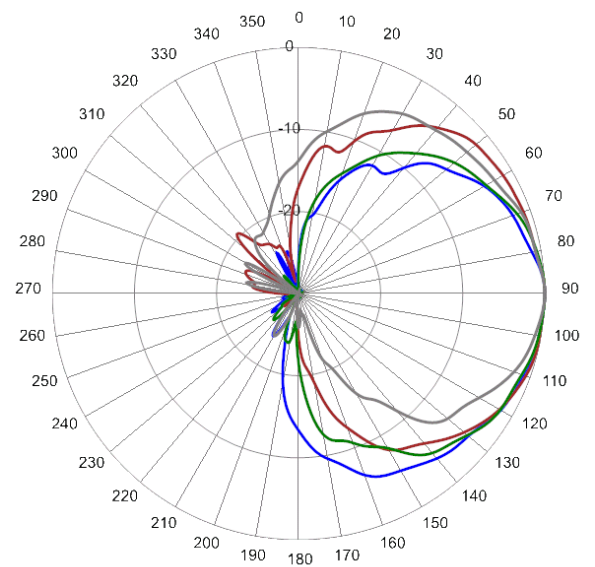
728 MHz Azimuth



728 MHz Elevation 4°



896 MHz Azimuth



896 MHz Elevation 4°



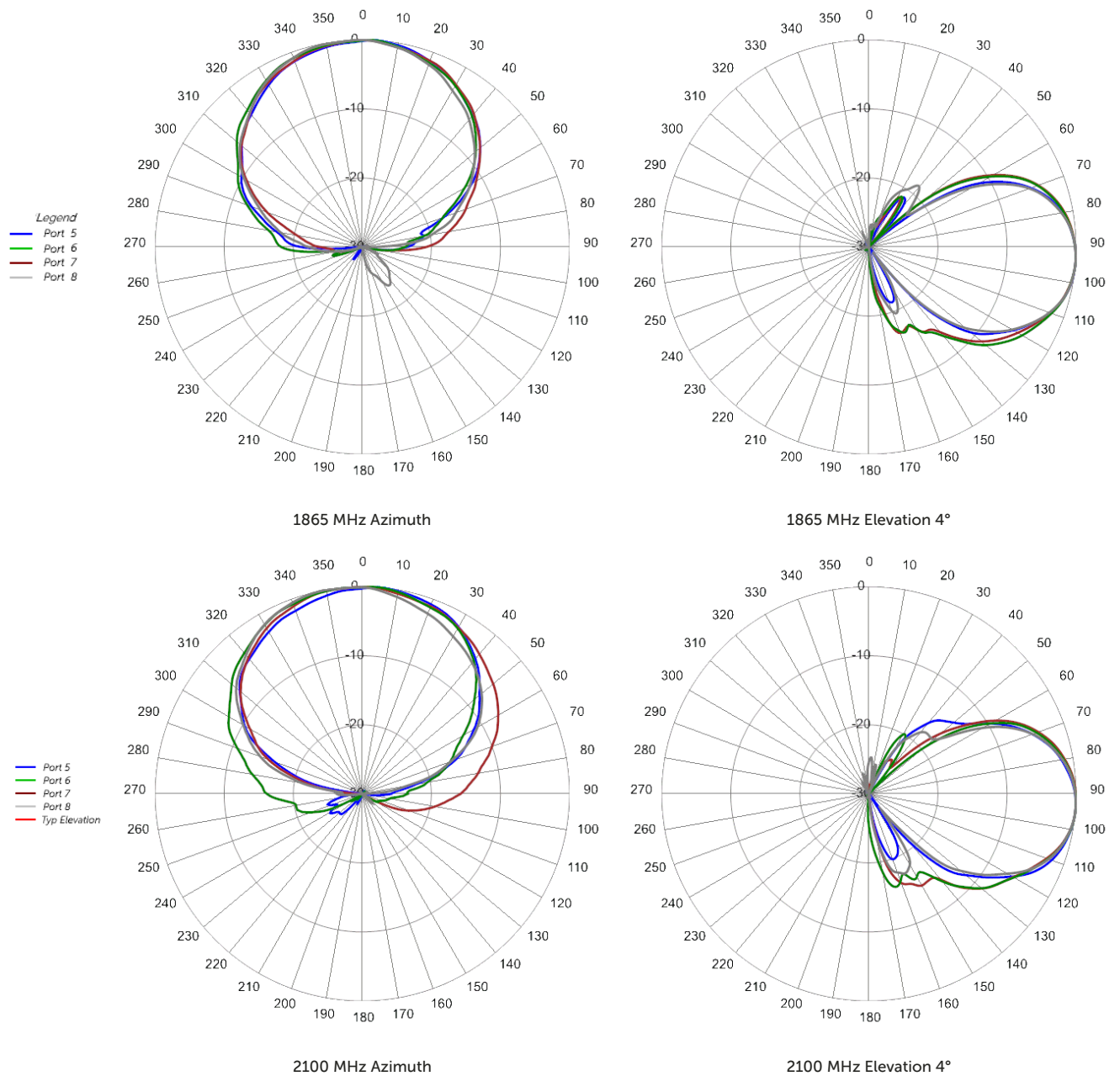
Antennas

SPECIFICATIONS

TriBand Small Cell Panel Antenna

SCA65F-KEH1B

Typical Antenna Patterns





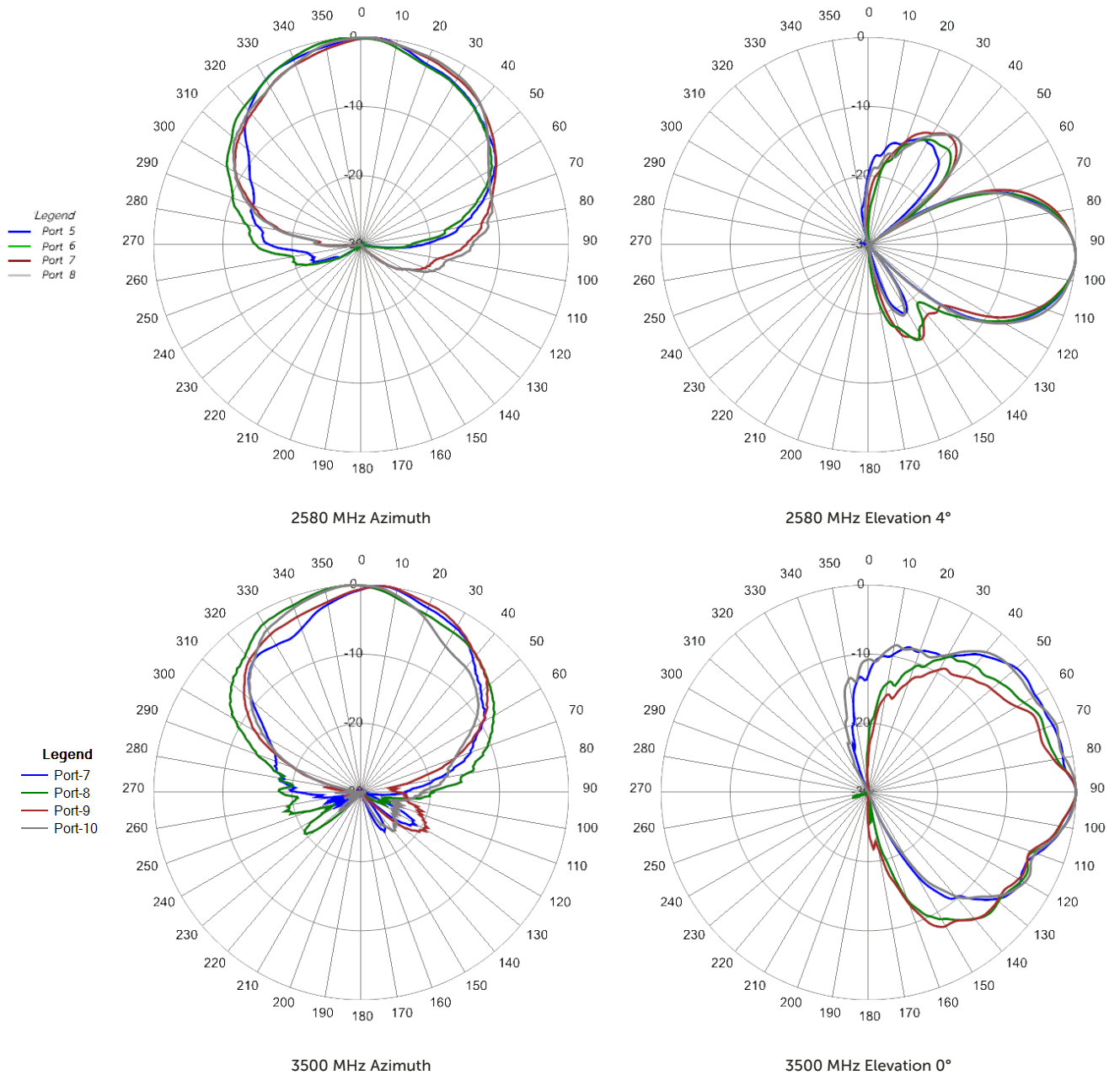
Antennas

SPECIFICATIONS

TriBand Small Cell Panel Antenna

SCA65F-KEH1B

Typical Antenna Patterns





Antennas

ORDERING

TriBand Small Cell Panel Antenna

SCA65F-KEH1B

Parts & Accessories

-
- | | |
|-------------------------|---|
| SCA65F-KEH1BA-K | 1 foot (0.5 m) TriBand Panel antenna with 65° azimuth beamwidth and 4.3-10 female connectors with MBK-14 Dual Axis tilt mounting bracket |
| SCA65F-KEH1BA-K1 | 1 foot (0.5 m) TriBand Panel antenna with 65° azimuth beamwidth and 4.3-10 female connectors with MBK-24 Dual Axis tilt pole mounting bracket |
| SCA65F-KEH1BA-K2 | 1 foot (0.5 m) TriBand Panel antenna with 65° azimuth beamwidth and 4.3-10 female connectors with MBK-17 wall mounting bracket |
| MBK-14 | Dual Axis Tilt Antenna Mounting Bracket is designed for use with specific CCI small panel antennas, to attach to a suitable flat surface or pole mount using steel banding (not supplied) |
| MBK-17 | Fixed Tilt Antenna Mounting Bracket is designed for use with specific CCI small panel antennas, to attach to a suitable flat surface |
| MBK-24 | Dual Axis Tilt Antenna Mounting Bracket is designed for use with specific CCI small panel antennas, to attach to a suitable 2.0-4.5 inch OD (5-11 cm) pole |
-



Antennas

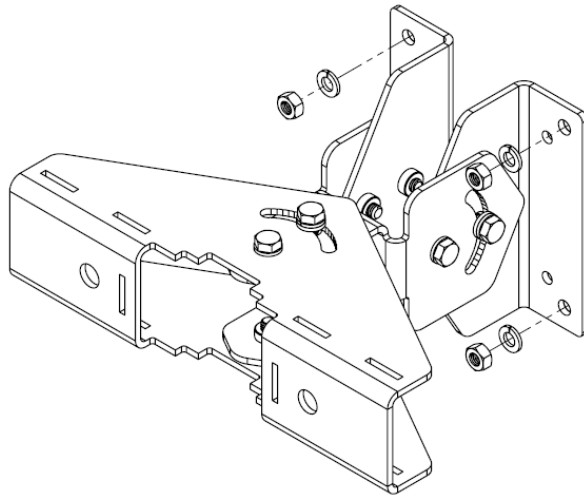
ACCESSORIES

Mounting Bracket Kit

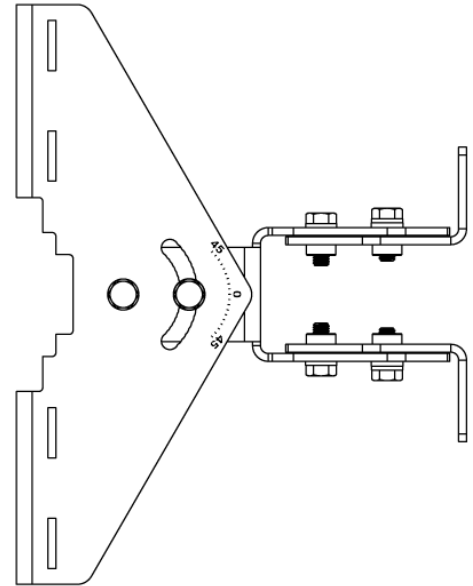
MBK-14

Mechanical

Weight 3.3 lbs (1.5 kg)



MBK-14 Adjustable Brackets



MBK-14 Adjustable Brackets Top View



Antennas

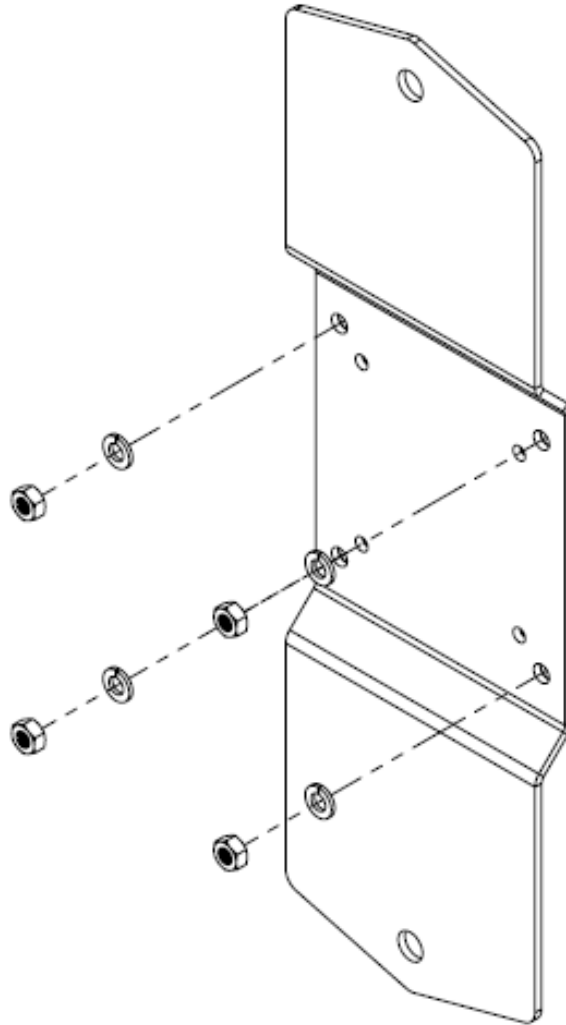
ACCESSORIES

Mounting Bracket Kit

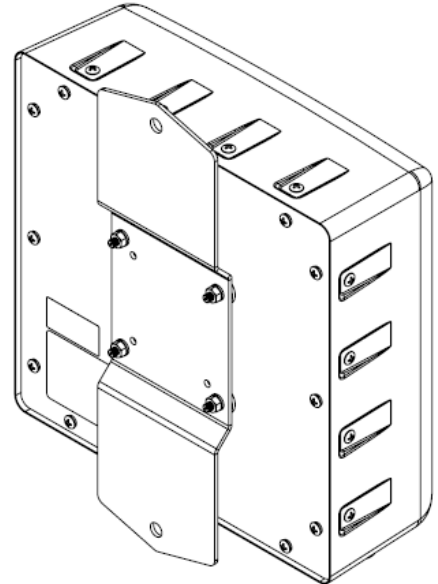
MBK-17

Mechanical

Weight 2.0 lbs (0.9 kg)



MBK-17



MBK-17 Installed to SCA65F-EJ1A



Antennas

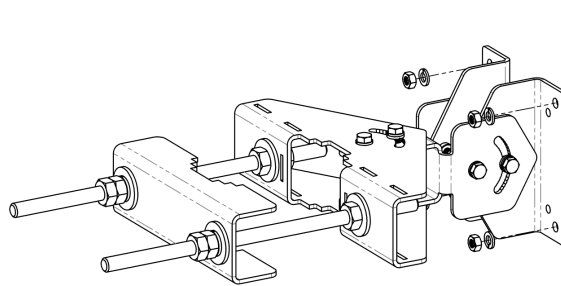
ACCESSORIES

Mounting Bracket Kit

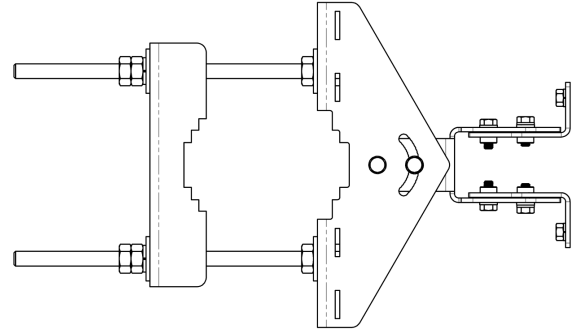
MBK-24

Mechanical

Weight 5.3 lbs (2.4 kg)



MBK-24 Adjustable Brackets



MBK-24 Adjustable Brackets Top View



Antennas

STANDARDS & CERTIFICATIONS

TriBand Small Cell Panel Antenna

SCA65F-KEH1B

Standards & Compliance

Environmental IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-5,
 IEC 60068-2-6, IEC-60068-2-11, IEC 60068-2-14,
 IEC 60068-2-18, IEC 60068-2-27, IEC 60068-2-29,
 IEC 60068-02-30, IEC 60068-2-52, IEC 60068-2-64,
 GR-63-CORE 4.3.1, EN 60529, IP 24

Certifications

Federal Communication Commission (FCC) Part 15 Class B, ISO 9001

